

**Claims:**

Claims 1 – 18 (canceled).

Claim 19 (new): A 10 Gigabit Attachment Unit Interface (XAUI) device comprising:

an output device capable of transmitting a serial data signal on a differential signaling pair over printed circuit board traces;

a plurality of current sources;

a plurality of selection devices coupled to the output device, each selection device being coupled to an associated one of the current sources to receive a first current when the selection device is active, each selection device being adapted to receive an associated bit of a parallel data signal; and

a current steering device to direct portions of a second current among a plurality of the current sources associated with inactive selection devices, the second current having a magnitude of about an integer multiple of a magnitude of the first current.

Claim 20 (new): The XAUI device of claim 19, wherein the XAUI device comprises  $n$  current sources and  $n$  selection devices, and wherein the magnitude of the second current is about an  $n-1$  multiple of the magnitude of the first current.

Claim 21 (new): The XAUI device of claim 19, wherein the XAUI device comprises a plurality of output devices, each output device being capable of transmitting a serial data signal on a differential signaling pair over printed circuit board traces.

**Claim 22 (new):** The XAUI device of claim 19, wherein the parallel data signal comprises a ten-bit code group.

**Claim 23 (new):** The XAUI device of claim 19, wherein the output device comprises circuitry to transmit the serial data signal on the differential signaling pair in response to bit signals transmitted by the selection devices.

**Claim 24 (new):** The XAUI device of claim 19, wherein the output device is capable of transmitting the serial data signal on bit intervals, and wherein no more than one selection device is activated during a bit interval to transmit a bit signal to the output device.

**Claim 25 (new):** The XAUI device of claim 24, wherein a selection device is activated in response to a clock signal.

**Claim 26 (new):** The XAUI device of claim 19, wherein each selection device is coupled between an associated current source and the output device, and wherein the associated current source is activated to apply a current to the selection device contemporaneously with activation of the selection device.

**Claim 27 (new):** The XAUI device of claim 19, the XAUI device further comprising a 10 gigabit media independent interface.

Claim 28 (new): A method comprising:

receiving one bit of a parallel data signal at each of a plurality of selection devices, each selection device being coupled to an associated one of a plurality of current sources;

applying a first current to an active selection device;

directing portions of a second current among a plurality of current sources coupled to inactive selection devices, the second current having a magnitude of about an integer multiple of a magnitude of the first current.

Claim 29 (new): The method of claim 28, the method further comprising:

receiving one bit of the parallel data signal at each of n selection devices; and  
directing the second current signal among n-1 current sources coupled to n-1 inactive selection devices,  
wherein the magnitude of the second current is about an n-1 multiple of a magnitude of the first current.

Claim 30 (new): The method of claim 28, wherein the parallel data signal comprises a ten-bit code group.

Claim 31 (new): The method of claim 28, the method further comprising transmitting a serial data signal in response to bit signals transmitted by the selection devices.

Claim 32 (new): The method of claim 31, wherein the bit signals are transmitted on bit intervals, and wherein the method further comprises activating no more than one selection device during a bit interval to transmit a bit signal.

Claim 33 (new): The method of claim 28, the method further comprising activating a current source contemporaneously with activation of an associated selection device.

Claim 34 (new): A parallel to serial conversion device comprising:  
an output device;  
a plurality of current sources;  
a plurality of selection devices coupled to the output device, each selection device being coupled to an associated one of the current sources to receive a first current when the selection device is active, each selection device being adapted to receive an associated bit of a parallel data signal;  
a current steering device to direct portions of a second current among a plurality of the current sources associated with inactive selection devices, the second current having a magnitude of about an integer multiple of a magnitude of the first current.

Claim 35 (new): The parallel to serial conversion device of claim 34, wherein the parallel to serial conversion device comprises  $n$  current sources and  $n$  selection devices, and wherein the magnitude of the second current is about an  $n-1$  multiple of the magnitude of the first current.

Claim 36 (new): The parallel to serial conversion device of claim 34, wherein the parallel data signal comprises a ten-bit code group.

Claim 37 (new): The parallel to serial conversion device of claim 34, wherein the output device comprises circuitry to transmit a serial data signal on a differential signaling pair in response to bit signals transmitted by the selection devices.

Claim 38 (new): The parallel to serial conversion device of claim 34, wherein the output device is capable of transmitting a serial data signal on bit intervals, and wherein no more than one selection device is activated during a bit interval to transmit a bit signal to the output device.

Claim 39 (new): The parallel to serial conversion device of claim 38, wherein a selection device is activated in response to a clock signal.

Claim 40 (new): The parallel to serial conversion device of claim 34, wherein each selection device is coupled between an associated current source and the output device, and wherein the associated current source is activated to transmit a current to the selection device contemporaneously with activation of the selection device.